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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/980,183	04/30/2002	Taizou Hamada	10873.696USWO	8324

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EXAMINER
KOPPIKAR, VIVEK D

ART UNIT	PAPER NUMBER
1775	11

DATE MAILED: 08/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

A811

Office Action Summary	Application No.	Applicant(s)	
	09/980,183	HAMADA ET AL.	
	Examiner	Art Unit	
	Vivek D Koppikar	1775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 May 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 January 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

SECOND, NON-FINAL OFFICE ACTION

Claim Objections

1. Claims 1-10 are objected to because of the following informalities: The examiner recommends using the terminology "slave disc" for the term "magnetic disc" so as to avoid confusing the master disc with the slave disc since the master disc is also a "magnetic disc" with an array of ferromagnetic films present on the surface of the master disc. Appropriate correction is required.

2. Claims 1-10 are objected to because of the following informalities: The examiner suggests changing the preambles of the claims so that it more clearly reflects what is being claimed in the body. The preamble currently recites only a master disc however the bodies of the claims have limitations which arise only when the master disc is in contact with a slave disc. The examiner suggests using a preamble such as "A master disc in contact with a slave disc."

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In Claim 1, line 13 it is not clear what is meant by the phrase "a space surrounded by the surface of the magnetic disc and the concave portion is open to air at a peripheral end portion of the magnetic disc." From this phrase it is not clear where the peripheral end portion of the magnetic disc is. As the claim is currently written the peripheral end portion of the magnetic disc could be either the opening in the center of the magnetic disc or

the space surrounding the circumference of the magnetic disc. (An opening in the center of the magnetic disc is a space surrounded by the surface of the magnetic disc and the inner diameter of the magnetic disc can be interpreted as a peripheral end).

For examination purposes the examiner will interpret this claim to mean that a space that surrounds the magnetic disc (slave disc) is open to air and a concave portion in the master disc is also open to air.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

7. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

8. Claims 1, 3, 6 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent Number 6,347,016 to Ishida.

With regard to Claim 1, Ishida teaches a master information carrier (191) which has embossed patterns (192) (land portion) and other areas (193) (concave portion) against the embossed patterns. The other areas (193) are concave and lower in height than the embossed

areas (192) (Col. 28, Ln. 27- 51). The embossed patterns are made of ferromagnetic material (Col. 9, Ln. 13-16). The master information carrier (191) is used to record a magnetic pattern on a hard disk (202) (magnetic recording medium) by applying a magnetic field in the form of a permanent magnetic (205). When the magnetic pattern is being formed on the hard disc a space exists between the hard disk (202) and the lowered areas (concave portions) (193) (Col. 28, Ln. 51-Col. 29, Ln. 11).

With regard to Claim 3, the land portion (embossed portion) (192) in Ishida is formed to be inward of a position corresponding to the peripheral end portion of the magnetic disc when the magnetic disc is overlapped on the principal plane (Figure 21).

With regard to Claims 6-7 the difference in level between the land portion (embossed portion) (192) and the concave portion (193) is more than 10 microns (Col. 28, Ln. 45-50).

9. Claim 10 is rejected under 35 U.S.C. 102(e) as being anticipated by US Patent Number 6,347,016 to Ishida.

With regard to Claim 10, Ishida teaches a master information carrier (191) which has embossed patterns (192) (land portion) and other areas (193) (concave portion) against the embossed patterns. The other areas (193) are concave and lower in height than the embossed areas (192) (Col. 28, Ln. 27- 51). The embossed patterns are made of ferromagnetic material (Col. 9, Ln. 13-16). The embossed patterns (192) of the master information carrier (191) are used to record a magnetic pattern on a hard disk (202) (magnetic recording medium) by overlapping the master disk (201) on a magnetic disk (202) and applying a magnetic field with the aid of a permanent magnet (205). Air is sucked out of the opening formed by the concave portion (193) of the master information carrier (191) to facilitate the magnetic recording process.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Number 6,347,016 to Ishida.

Ishida does not explicitly recite a land portion on the master disc formed to reach an area outside a position corresponding to the peripheral end portion of the magnetic disc when the magnetic disc is overlapped on the principal plane nor does Ishida teach a land portion on the magnetic disc formed to be outward of a position corresponding to the internal circumferential end portion of the magnetic disc when the magnetic disc is overlapped on the principal plane.

However the examiner takes the position that these limitations are dependent on the physical dimensions of the slave (magnetic disc) used and even though a 3.5 or 5 inch size disc is used (Col. 2, Ln. 34-39), Ishida suggests a smaller sized magnetic disc can also be used which would result in the land portions on the master disc of Ishida reaching an area outside a position corresponding to the peripheral end portion of the magnetic (slave disc) and land portions of Ishida also reaching positions corresponding to outward positions of the magnetic disc (slave disc) as measured from the internal circumferential end. Ishida suggests using smaller discs because these discs require less information signals to be written for the preformat and require less time for the writing.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a smaller disc because one of ordinary skill in the art would have been motivated to reduce the amount of information signals during the writing operation for the preformat and reduce the writing time by using a smaller sized disc. As noted above using a smaller size disc would have resulted in the radial land portions reaching an area outside the peripheral end portion of the magnetic disc and outside an internal circumferential end of the magnetic disc.

12. Claims 1, 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-273069 (hereafter referred to as JP'069) in view of JP 11-025455 (hereafter referred to as JP'455).

JP'069 teaches magnetizing a hard disk (61) with a master information carrier (62). A ferromagnetic film pattern is formed on the master information carrier and this pattern is imparted on the hard disk (61) by using a magnetic field. The master information carrier includes a radial land portion (41) which contacts the magnetic disc. A space surrounded by the surface of the magnetic disc and the concave portion is open to air at a peripheral end portion of the magnetic disc (Translated Abstract and Drawing 4).

JP'069 does not teach or suggest a that a portion of the magnetic information carrier (62) against the radial land portion (41) is concave and does not touch the magnetic hard disc when the master information disk (62) comes into contact with the hard disc (61).

JP' 455 teaches a magnetic transfer device which consists of a master which imparts a magnetic pattern on a slave disk. The master disc includes a radially recessed portion (4) against

the land portion (2) in order to make the master and the slave disc closely stick together (Translated Abstract, Description of the Drawings and Drawing 7).

At the time of the invention one of ordinary skill in the art would have been motivated to include a concave recessed portion, as recited in JP' 455, against a radial land portion on the surface of the master information carrier in JP'069 with the expectation of producing a magnetic transfer device in which master and the slave (hard disc) closely contacted each other during the transfer of magnetic patterns from the master to the slave discs.

With regard to Claim 3, in JP' 069 the land portion is formed to be inward of a position corresponding to the peripheral end portion of the magnetic disc when the magnetic disc is overlapped on the principal plane (Drawing 4).

With regard to Claim 5, in JP'069 the diameter of the master disc (62) is larger than the diameter of the magnetic disc (61) (Drawing 7).

13. Claim 10 rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-273069 (hereafter referred to as JP'069) in view of JP 11-025455 (hereafter referred to as JP'455).

JP'069 teaches magnetizing a hard disk (61) with a master information carrier (62) with the aid of a permanent magnet (66). A ferromagnetic film pattern is formed on the master information carrier and this pattern is imparted on the hard disk (61) with the aid of a magnetic field (66) (permanent magnet). The master information carrier includes a radial land portion (41) which contacts the magnetic disc. A space surrounded by the surface of the magnetic disc and the concave portion is open to air at a peripheral end portion of the magnetic disc (Translated Abstract and Drawing 4).

JP'069 does not teach or suggest a that a portion of the magnetic information carrier (62) against the radial land portion (41) is concave and does not touch the magnetic hard disc when the master information disk (62) comes into contact with the hard disc (61). JP'069 also does not teach that air is applied when the magnetic field is used to transfer the magnetic pattern onto the magnetic disc.

JP' 455 teaches a magnetic transfer device which consists of a master which imparts a magnetic pattern on a slave disk. The master disc includes a radially recessed portion in order to make the master and the slave disc closely stick together (Translated Abstract, Description of the Drawings and Drawing 7). JP'455 also teaches that air is applied to a slot in the master information carrier when the pattern on a master information disc is transferred to the magnetic (slave) disc (Effect of the Invention).

At the time of the invention one of ordinary skill in the art would have been motivated to include a concave recessed portion, as recited in JP' 455, against a radial land portion on the surface of the master information carrier in JP'069 with the expectation of producing a magnetic transfer device in which master and the slave (hard disc) closely contacted each other during the transfer of magnetic patterns from the master to the slave discs. One of ordinary skill in the art would have also been motivated to generate an airflow in the concave portion of the magnetic disc with the expectation of enhancing the exfoliation of the pattern without damaging the master information carrier as recited in JP'455.

14. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishida as applied to claim 1 above, and further in view of US Patent Number 5,800,253 to Ikemoto.

Ishida teaches that a 3.5 inch magnetic disc is used as the recording medium (Col. 2, Ln. 34-36) to but does not specify the outer or inner diameter of the magnetic information carrier.

However the claimed values for the inner and outer diameters for the magnetic disc are standard especially in view of Ikemoto which teaches that for a 3.5 inch disc the outer diameter is 95 mm while the inner diameter is 25 mm.

Response to Arguments

15. The 35 USC 112 rejection set fourth in Paper No. 8 has been overcome in view of applicants' explanation filed on May 20, 2003.

16. With regard to the 35 USC 102(e) and the 35 USC 103(a) rejections as set fourth in Paper No. 8, applicant's arguments filed May 20, 2003 have been fully considered but they are not persuasive.

Applicants argue that the prior art used in these rejections (Ishida, JP'455 and JP'069) do not teach a master disc configured so that "a space surrounded by the surface of the magnetic disc and the concave portion is open to air at a peripheral end portion of the magnetic disc" as required by Claim 1.

However the examiner would like to point out that Figure 16 of Ishida show a master disc (161a and 161b) and a hard disc (162) between the two master discs. From Figure 16 is apparent that a space surrounded by the surface of the magnetic disc and the concave portion is open to air at a peripheral end portion.

JP'069 also shows a magnetic disc (61) in contact with a master disc (62) in which a space surrounded by the surface of the magnetic disc and the concave portion is open to air at a

peripheral end portion (in Drawing 5 a space is present in the drawing between the master disc (62) and the magnetic disc (61)).

Applicants argue that JP'069 fails to disclose a master disc being "provided in one peripheral plane with a radial land portion where the array of the ferromagnetic films is formed in a concave portion against the land portion." They go on to argue that regions (denoted as '41') are not formed on a land portion but are merely provided with fine projections and recesses by forming an array of ferromagnetic material thin films.

However the examiner takes the position that the regions (41) in JP'069 are land portions since they are projections just as the land portions (5) in the instant invention are projections from the master disc of the instant invention. In addition, at the time of the invention one of ordinary skill in the art would have been motivated to have formed concave recesses (denoted as '4' in JP'455) in the master disc of JP'069 (in the area surrounding the regions denoted as 41 in JP'069) as taught in JP'455 with the expectation of producing a magnetic transfer device in which the master disc and the slave disc closely contacted each other during the transfer of magnetic patterns from the master to the slave disc as recited in JP'455 (Translated Abstract). Once these concave recessed portions would have been formed on the master disc of JP'069 they would create a corresponding land portion.

Allowable Subject Matter

17. The indicated allowability of claims 2-4 are withdrawn in view of the 35 USC 103 rejection over US Patent Number 6,347,016 to Ishida as set forth above. Upon a broader interpretation of these claims it was found that Ishida reads on Claims 2 and 4.

Conclusion

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Vivek Koppikar** whose telephone number is **(703) 305-6618**. The examiner can normally be reached on Monday-Friday from 8 AM to 5 PM, Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones, can be reached at (703) 308-3822. The fax phone numbers for the organization where this application or proceeding are assigned are (703) 305-7718 for regular communications and (703) 305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Vivek Koppikar

8/8/03

JOHN J. ZIMMERMAN
PRIMARY EXAMINER